

STATEWIDE COURSE SYLLABUS

Food Science and Dietetics 2

Instructor:

Teacher's Name:

Teacher Room Number:

Phone :

Fax:

Email:

Webpage:

Hours Available:

Career Cluster: Science, Technology, Engineering, and Mathematics

CIP Code: 190501

Course Number and Title: 5758 Food Science and Dietetics 2

Course Description: Discover different ways to preserve food. Create an original food product, technique, or process to be used in the food industry. Learn biology, chemistry, and physics as you continue to investigate principles of food processing and food science. Topics to be covered include food safety and regulations, processing and preservation, product development, and nutritional content of various foods. The course places emphasis on hands-on lab activities and discussion. Integration of the Family and Consumer Sciences co-curricular student organization, Family, Career, and Community Leaders of America (FCCLA), greatly enhances this course.

Grade Level: 11 – 12

Carnegie Units:

(Regulation 43-232: High School Credit - A school may award one unit of credit for an academic standards-based course that requires a minimum of 120 hours of instruction.)

Required Prerequisite: Food Science and Dietetics 1

National Assessment/Credential:**South Carolina State Standards and Indicators**

Unit 1: **Topic:** SAFETY AND SANITATION

Amount of Time:**State Standard:**

1. Evaluate safety and sanitation procedures.

Indicators:

1. Qualify for food safety and sanitation certification.
2. Demonstrate safe use of lab equipment.

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3. Integrate safe lab techniques and procedures.
4. Implement sanitation practices in the lab, home, organizational systems, and the larger environment.

Amount of Time:

State Standard:

2. Determine the economic and ethical advantages and disadvantages of using biotechnology.

Indicators:

1. Discuss the benefits and/or threats of biotechnology to the world's food supply.
2. Identify the epidemiological studies associated with life experiences.

Unit 2: Topic: **SCIENTIFIC METHODS**

Amount of Time:

State Standard:

1. Demonstrate scientific method procedures.

Indicators:

1. Analyze scientific methods used and factors involved in the processing of foods.
2. Explain why accurate scientific measurements are required for scientific investigations.
3. Implement the scientific method and science process skills (hypothesis and theory) through research design.
4. Interpret, analyze, and report data.

Unit 3: Topic: **BIOORGANIC CHEMISTRY**

Amount of Time:

State Standard:

1. Analyze the metabolic impact of nutrients on the body.

Indicators:

1. Differentiate the functions of the macro- and micronutrients.
2. Analyze enzyme reactions in foods.
3. Describe the functions of acids and bases in foods.
4. Explain the effect of hydrolysis and dehydration synthesis.

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Unit 4: Topic: **FOOD PRODUCTION**

Amount of Time:

State Standard:

1. Evaluate various methods of food processing and preservation.

Indicators:

1. Compare dehydration methods.
2. Explore methods used to freeze foods.
3. Demonstrate canning techniques.
4. Explain irradiation practices on foods.

Amount of Time:

State Standard:

1. Analyze the advantages and disadvantages of microbes.

Indicators:

1. Identify the characteristics of microbes.
2. Describe the effects of microbes on food.
3. Explain the effects of microbes in fermentation process. (i.e. soy sauce, yogurt, etc.)
4. Differentiate the types of pasteurization used in food productions.
5. Differentiate the types of food borne illnesses.
6. Describe the ways pathogens enter food supplies.

Unit 5: Topic: **CAREERS IN FOOD SCIENCE AND DIETETICS**

Amount of Time:

State Standard:

1. Analyze career paths in food science and dietetics.

Indicators:

1. Demonstrate knowledge, skills, and practices required for careers in food science and dietetics.
2. Identify co-curricular student organizations related to food science and dietetics.
3. Analyze professional organizations related to food science and dietetics.
4. Maintain an employment portfolio.

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Course Outline

	Unit/Lesson	Textbook Chapter		Unit/Lesson	Textbook Chapter
Week 1			Week 10		
Week 2			Week 11		
Week 3			Week 12		
Week 4			Week 13		
Week 5			Week 14		
Week 6			Week 15		
Week 7			Week 16		
Week 8			Week 17		
Week 9			Week 18		

Academic Alignments:

Course content is aligned with the following academic subject areas:

English Language Arts	Health and Safety Education	Technology
Earth Science	Elementary Algebra	Physics
Economics	Geometry	Biology
Chemistry	Intermediate Algebra	Data Analysis
U. S. History	Precalculus	U. S. Government
Physical Science		

Textbook(s):

Evaluation and Grading:

1. Grading System:

2. Grading Scale:

A = 100 - 93
B = 92 - 85
C = 84 - 77
D = 76 - 70
F = 69 - below

Make-up Policy and Extra Help:

Supplies Needed:

Classroom Expectations:

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Classroom Procedures:

Collaborative Partnerships:

Advisory Council: The advisory council meets two times per year, once during the fall semester and once during the spring semester. All parents are invited to join our advisory council. Please contact me if you are interested.

Business/Community Connections: Businesses and community representatives are invited to serve on our advisory council. We encourage our local businesses and community representatives to provide speakers, field trip opportunities, donations, and other resources to support students in the school to work transition.

Dual Credit/Articulation Opportunities (Transition Strategies for Middle School):

Service Learning Projects:

Extended Learning Opportunities:

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21st Century Skills

http://www.p21.org/index.php?option=com_content&task=view&id=254&Itemid=120

The elements listed below are 21st Century Student Outcomes representing skills, knowledge and expertise students should master to succeed in work and life in the 21st century. These elements are incorporated throughout the course content.

<p>Core Subjects and 21st Century Themes</p> <ul style="list-style-type: none"> • English, Reading or Language Arts • World Languages • Arts • Mathematics • Economics • Science • Geography • History • Government and Civics 	<p>Learning and Innovation Skills</p> <ul style="list-style-type: none"> • Creativity and Innovation Think Creatively Work Creatively with Others Implement Innovations • Critical Thinking and Problem Solving Reason Effectively Use Systems Thinking Make Judgments and Decisions Solve Problems • Communication and Collaboration Communicate Clearly Collaborate with Others
<p>Information, Media and Technology Skills</p> <ul style="list-style-type: none"> • Information Literacy Access and Evaluate Information Use and Manage Information • Media Literacy Analyze Media Create Media Products • ICT Literacy Apply Technology Effectively 	<p>Life and Career Skills</p> <ul style="list-style-type: none"> • Flexibility and Adaptability Adapt to Change Be Flexible • Initiative and Self-Direction Manage Goals and Time Work Independently Be Self-directed Learners • Social and Cross-Cultural Skills Interact Effectively with Others Work Effectively in Diverse Teams • Productivity and Accountability Manage Projects Produce Results • Leadership and Responsibility Guide and Lead Others Be Responsible to Others

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CHECKLIST

Please check each item you have read and understand:

Syllabus Categories	Parent	Student
Course Description		
Unit Topics/Course Standards/Indicators		
National Assessments		
Course Outline		
Academic Alignments		
Textbook		
Evaluation and Grading		
Make-up Policy and Extra Help		
Supplies Needed		
Classroom Expectations		
Classroom Procedures		
Collaborative Partnerships		
Dual Credit and Articulation Opportunities		
Service Learning Projects		
Extended Learning Opportunities		
21 st Century Skills		

Please refer to contact information on the first page if you have any questions. Your signature below verifies that you have read, understand, and agree with the contents of this syllabus.

Student Signature: _____ Date: _____
 Student Printed Name: _____
 Parent Signature: _____ Date: _____
 Parent Printed Name: _____